network, further enable the mobile nodes to access a fixed network and thus communicate with other types of user terminals, such as those on the public switched telephone network (PSTN) and on other networks such as the Internet. Details of these types of ad-hoc networks are described in U.S. patent application Serial No. 09/897,790 entitled "Ad Hoc Peer-to-Peer Mobile Radio Access System Interfaced to the PSTN and Cellular Networks", filed on June 29, 2001, in U.S. patent application Serial No. 09/815,157 (now Pat. No 6,807,165) entitled "Time Division Protocol for an Ad-Hoc, Peer-to-Peer Radio Network Having Coordinating Channel Access to Shared Parallel Data Channels with Separate Reservation Channel", filed on March 22, 2001, and in U.S. Patent Application Serial No. 09/815,164 entitled "Prioritized-Routing for an Ad-Hoc, Peer-to-Peer, Mobile Radio Access System", filed on March 22, 2001, the entire content of each of said patent applications being incorporated herein by reference.

[0004] As can be appreciated by one skilled in the art, when a node sends packetized data to a destination node, the node typically checks its routing table to determine whether the destination node is contained in its routing table. If the destination node is contained in the node's routing table, the data is transmitted via a path that leads to the destination node. If the destination node is not listed in the node's routing table, then the packet is sent to one or more other nodes listed in the node's routing table, and those other nodes determine if the destination table is listed in their routing tables. The process continues until the data packet eventually reaches the destination node.

[0005] In these types of ad-hoc networks, data transmitted from one station to another is affected by adverse conditions. These conditions may prevent the transmitted data from being correctly received by the destination station. In order to provide a high reliability of data transfer, the transmit power and data rate must be adjusted to proper levels. Although high transmit power and low data rate assure that the signals are received by the receiving station at the highest reliability, they cannot be used without having negative effect on network operation. For example, because high transmit power enables the transmitted signal to be received at distances far away from the transmitter, this prevents the same frequency channel to be used for making other connections between other stations within the range of the high power transmit signal. Furthermore, transmission at a lower data rate typically uses higher energy than at a higher data rate, while requiring a longer period of time for transmitting the same amount of data that could be transmitted quicker at a higher data rate.